C.A.

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Reaction of dinitrodiphenylureas with aromatic amines. I. M. Kogan and D. F. Kutepov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1030-7(1951).—Reaction of (RC$_6$H$_4$NH)$_2$CO (R = p-O$_2$N) (I) with PhNH$_2$ leads to displacement of R by the PhNH group to form carbanilide and is almost quant. in 15 min. at reflux. In this direction the reaction is very rapid, but nevertheless it is reversible, and with excess p-O$_2$NC$_6$H$_4$NH$_2$ a slow displacement in the opposite direction takes place. Other dinitro derivs. of carbanilide also react in this manner. The displacement of the R radicals in I with PhNH$_2$ is most complete at 180°, as at 190° only 80.3% conversion in 15 min. occurs, while 3.2 moles PhNH$_2$ represents the optimum mol. ratio. In (CH$_2$OH)$_2$ as solvent the yield of p-O$_2$NC$_6$H$_4$NH$_2$ was const. regardless of various conditions at 180° (85%), but at 190° a 90% yield is obtained. (*m*-O$_2$NC$_6$H$_4$NH)$_2$CO, m. 240°, heated with 3 moles PhNH$_2$ 15 min. to 180° gave 74.5% m-O$_2$NC$_6$H$_4$NH$_2$. Similarly, 2,4-Me(O$_2$N)C$_6$H$_3$NH)$_2$CO, m. 300°, in 1 hr. at 180° with 3 moles PhNH$_2$ gave 4-nitro-o-toluidine, m. 135°, while o-MeC$_6$H$_4$NH$_2$ gave in 1 hr. at 200° (o-MeC$_6$H$_4$NH)$_2$CO, m. 255°, and 4-nitro-o-toluidine. Heating carbanilide with 8 moles p-O$_2$NC$_6$H$_4$NH$_2$ 1 hr. at 170° gave 37% PhNH$_2$ and 30% pure I, m. 310.5° G. M. K.

Gen. LAB., Dorogomilovsk Chem Plant im FRUNZE

KOGAN, I. M.

191T28

USSR/Chemistry - Nitro Derivatives Jul 51

"Nitration of Diphenylurea (Carbanilide)," I. M. Kogan, D. F. Kutepov, Cen Lab, Dorogomilov Chem Plant imeni M. V. Frunze

"Zhur Obshch Khim" Vol XXI, No 7, pp 1297-1302

Demonstrated that carbanilide is nitrated with same orientation (o and p) as other acylated aniline derivs. Nitration both in monohydrate and in aq suspension yields varying amts of 4,4'-dinitrocarbanilide. This compd can be practically prepd by nitration in aq suspension at

191T28

USSR/Chemistry - Nitro Derivatives Jul 51
(Contd)

90° C using 30% HNO_3. Curtius' view that m,m'-dinitrocarbanilide is formed in nitration of carbanilide must be considered wrong.

191T28

KOGAN, I. M.

A

Hydrolysis of diphenylurea (carbanilide). I. M. Kogan and D. F. Kutepov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1199-203(1951). $CO(NHPh)_2$ (I) can be hydrolyzed in acid as well as in alk. media. At 100° it is stable in acid media and is but little attacked by alkalies. Heating I with 56% H_2SO_4 2.5 hrs. at 150° yields 91.2% $PhNH_2$. Variation of the acid concn. at 150° in a 1.2-hr. hydrolysis shows that the max. is reached at 74.8% H_2SO_4, when 99.1% $PhNH_2$ is obtained. Acid of this concn. gives the best result at 150°, since at 175° the yield of $PhNH_2$ declines to 98.3%; the duration study indicates that after 1 hr. at 150° the acid of 74.8% concn. gives 97% hydrolysis, with slow hydrolysis from that point on; some 85% hydrolysis occurs in the 1st 30 min. No hydrolysis occurs with concd. HCl at 100° in 2 hrs., while 20% HCl in 2.5 hrs. at 125° gives 13.8% $PhNH_2$; at 150° 30% HCl gives 98.4% hydrolysis in 2 hrs., while at 125° only 94.8% hydrolysis occurs in 2.5 hrs., and at 105° only 68% in 2.5 hrs. Heating with 10% NaOH 4 hrs. at 100° gives 1% hydrolysis, while at 125° it is 89% and at 150° it is 98%; 5.0% NaOH at 150° in 4 hrs. gives 95.0% hydrolysis while 20% NaOH gives 97% hydrolysis; in 6 hrs. 10% NaOH at 150° give 99.1% hydrolysis. At 150° in 4 hrs. 4.5% NH_4OH gives 99.1% hydrolysis; at 125° the reaction is but 94% complete while at 100° only 4.47% $PhNH_2$ forms. G. M. Kosolapoff

Cr

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Reaction of arylsulfonamides with amines. L. M. Kogan and V. M. Dolinina (Technol. Inst. Food Ind., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1891-7(1951).—Amides of sulfonic acids can acylate primary amines; the aromatic derivs. require the presence of HCl, preferably as the HCl salt of the desired amine. In the acylation of tertiary amines, 1 alkyl group is cleaved. No reaction occurs on heating $PhNH_2$ with 4'-nitro-*p*-toluenesulfonanilide (I) at 180°, but heating 20 min. in the presence of $PhNH_3Cl$ to 200-30° gives up to 29.5% *p*-nitroaniline and *p*-toluenesulfonanilide (II), m. 102-3°. Similarly *p*-Me[illegible] NHPh does not react with [illegible] [illegible] H_4SO_2NHPh with $PhNH_3Cl$ in 15 min. at 190-200° gave 80% II (calcd. on the reacted amide). This reaction with $PhNMe_2$ gave 17% *N*-methyl-*p*-toluenesulfonanilide, m. 94°, while heating *p*-$MeC_6H_4SO_2NPh_2$ with $PhNH_3Cl$ to 195° 20 min. gave Ph_2NH and 37% II, m. 103-4°.

G. M. Kosolapoff

CA

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Hydrolysis of 4,4'-dinitrodiphenylurea (4,4'-dinitrocarbanilide). I. M. Kogan and D. F. Kutepov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 2029-32(1951).—Hydrolysis of $(p\text{-}O_2NC_6H_4NH)_2CO$ in acid media does not go to completion; with 74.8% H_2SO_4 (optimum concn.) the yield of *p*-nitroaniline reaches 97.5%; increased temp. usually lowers the yield (95% at 150°, but 71% at 175°). No hydrolysis occurs in HCl solns. below 100° and increase of temp. accelerates the hydrolysis so that at 180° 83.9% hydrolysis occurs, and only 25.3% at 105° in 6 hrs. In alk. solns. hydrolysis is also incomplete, especially since decompn. of the nitroaniline occurs concurrently in the hot alk. soln. For hydrolysis the best medium is 4.5% NH_4OH soln. at 150° or 20% at 120°, when 92-6% yields of pure nitroaniline are obtained. G. M. Kosolapoff

KOGAN, I. M., FERTMAN, G. I.

Wine and Wine Making

Fine new textbook "Chemistry of wine." Reviewed by I. M. Kogan, G. I. Fertman. Vin. SSSR 12 no. 5 (1952).

9. Monthly List of Russian Accessions, Library of Congress, August, 1952 ~~1953~~, Uncl.

KOGAN, I.M.; DZIOMKO, V.M.

Reaction of arylsulfamides with amines. Part 2. Zhur.ob.khim. 23 no.7: 1234-1236 Jl '53. (MLRA 6:7)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Sulfamides) (Amines)

KOGAN, Iosif Mikhaylovich; KOROLEV, A.I., professor, redaktor; FODIMAN, I.V., redaktor; LUR'YE, M.S., tekhnicheskiy redaktor

[The chemistry of dyes] Khimiia krasitelei. Izd. 3-e. Pod red. A.I. Koroleva. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 696 p. (MLRA 9:12)

(Dyes and dyeing--Chemistry)

KOGAN, I.M.

[redacted] Reactions of ethylene chlorohydrin with magnesium hydroxide.
Zhur. prikl. khim. 31 no.9:1437-1440 S '58. (MIRA 11:10)
(Ethanol) (Magnesium hydroxide)

85487

S/108/60/015/011/010/012
B019/B063

16.9500 (1024, 1132, 1344)

AUTHOR: Kogan, I. M., Member of the Society

TITLE: Stability of Threshold Slave Devices With Spread Parameters

PERIODICAL: Radiotekhnika, 1960, Vol. 15, No. 11, pp. 65-72

TEXT: The author introduces a "threshold function" 16 for estimating the stability of a threshold slave device. It is shown that a spread of the parameters reduces the stability of the device considerably. By using the function (2)
$f(U_o, \xi_1, \xi_2, \ldots, \xi_n) = \exp\left\{-me^{-nU_o^2}\xi(U_o, \xi_1, \xi_2 \ldots, \xi_n)\right\}$ (as soon as U_o reaches a certain value U^*, the value of such an exponential function is known to change from approximately zero to approximately one) it is easily possible to approximate the threshold function

$$Z(U_o) = 0 \text{ for } U_o \ll U^*$$

Card 1/2

85487

Stability of Threshold Slave Devices With Spread Parameters

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$Z(U_0) = 1$ for $U_0 > U^*$. In particular, the author studied inertialess and inert devices, and also a device with a pulse counter. There are 8 figures and 3 Soviet references.

SUBMITTED: September 15, 1959

Card 2/2

KOGAN, I.M. [Kohan, I.M.]

Conisation biopsy of the cervix uteri. Ped., akush. i gin. 22 no.5:46 '60. (MIRA 15:6)

1. Ginekologicheskoye otdeleniye Khmel'nitskoy oblastnoy bol'nitsy (glavnyy vrach - Ye.O. Gorbanch[illegible] [Horbanchuk, E.O.]).
(UTERUS—BIOPSY)

KOGAN, I.M.

Study of motor-defensive conditioned reflexes. Biul. eksp. biol. i med. 50 no.7:113-117 Jl '60. (MIRA 14:5)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - kand. med. nauk O.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - prof. A.D.Semenov, nauchnyy konsul'tant - dystvitel'nyy chlen AMN SSSR V.N. Charnigovskiy) i laboratorii fiziologii vysshey nervnoy deyatel'nosti (zav. - prof. E.Sh. Ayrapet'yants) Leningradskogo universiteta. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.

(CONDITIONED RESPONSE)

KOGAN, I.M.

Study of the higher nervous activity in experimental tuberculosis. Report No.2: Study of motor-defense conditioned reflexes in dogs. Biul.eksp. biol. i med. 51 no.1:43-49 Ja '61. (MIRA 14:5)

1. Iz laboratorii eksperimental'nyy patologii i terapii (zav. G.S. Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - prof. A.D.Semenov, nauchnyy konsul'tant akademik V.N.Chernigovskiy) i laboratorii fiziologii vysshey nervnoy deyatel'nosti (zav. - prof. E.Sh.Ayrapet'yants) Leningradskogo universiteta. Predstavlena akademikom V.N.Chernigovskim.
(TUBERCULOSIS) (CONDITIONED RESPONSE)

KOGAN, I.M.

Characteristics of motor defense conditioned reflexes in dogs in experimental tuberculosis; Report No. 1. K izuch.roli nerv. sist.v pat., immun.i lech.tub. no.2:138-150 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo instituta tuberkuleza i iz laboratorii vysshey nervnoy deyatel'nosti (zav. - prof. E.Sh.Ayrapet'yants) Leningradskcgo gosudarstvennogo universiteta.
(CONDITIONED RESPONSE) (TUBERCULOSIS)

KOGAN, I.M.

Characteristics of motor defense conditioned reflexes in dogs in experimental tuberculosis; Report No.2. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:151-163 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo instituta tuberkuleza i laboratorii vysshey nervnoy deyatel'nosti (zav. - prof. E.Sh.Ayrapet'yants) Leningradskogo gosudarstvennogo universiteta.
(TUBERCULOSIS) (CONDITIONED RESPONSE)

KOGAN, I.M.

Materials on a study of acid defense conditioned reflexes in experimental tuberculosis. K izuch.roli nerv.sist.v pat., immun. i lech.tub. no.2:164-173 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo instituta tuberkuleza i laboratorii vysshey nervnoy deyatel'nosti (zav. - E.Sh.Ayrapet'yants) Leningradskogo gosudarstvennogo universiteta.
(CONDITIONED RESPONSE) (TUBERCULOSIS)

GABER, I.E.; KAN, G.S.; KRASUSKIY, V.K.; KOGAN, I.M.

Diverse effect of experimental tuberculous infection on food and defense conditioned reflexes. Pat. fiziol. i eksp. terap. 8 no.6:57-62 N-D '64. (MIRA 18:6)

1. Laboratoriya eksperimental'noy patologii i terapii (zav. - G.S. Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza.

AUTHOR: Kogan, I.N. and Menes, L.I. 46-1-7/20

TITLE: A barium titanate ultra-sonic source of high intensity. (Ultrazvukovoy izluchatel bolshoy intensivnosti na titanate barii.)

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol. III, No. 1, pp. 62 - 64 (U.S.S.R.)

ABSTRACT: A high intensity uni-directional barium titanate ultrasonic source is described. High power was made possible by the use of a thin (0.01 mm) air spacing between the ceramic disc and reflector, as suggested by I.E. Elpiner. Such a layer is a good reflector of incident waves and is also a good thermal conductor, permitting adequate cooling of the ceramics.

The disc of barium titanate is embedded into the metal base of the holder and pressed against it by the reflector containing the circulating water. Between the reflector and the back surface of the piezo-electric element a thin (0.01 mm) air spacing is created. This is hermetically sealed by a rubber ring. The surfaces of the ceramic disc are flash-silvered and then galvanically coated with nickel-copper. This and DC voltage polarisation produces better stability. The above construction was applied successfully to an ultrasonic barium titanate generator. The disc was 38 mm in diameter, working at 400 and 800 kc/s continuously for several months. The polarising voltage was kept constant to give a field of 8 kv/cm as recommended by Huelter, Neuhaus and Kolb (3). For long periods, the source was radiating up to

Card 1/2

A barium titanate ultra-sonic source of high intensity.
(Cont.)

46-1-7/20

15 W/cm^2. The barium titanate disc was one of standard products of the State Electro-ceramics Research Institute of the Ministry of Electrical Industries of U.S.S.R. (Gosudarstvennyy issledovatelnyy elektro-kermicheskiy institut Ministerstva elektropromyshlennosti S.S.S.R.)

Sectional drawing of the generator is included. There are 4 references, of which 2 are Russian.

ASSOCIATION: Plastics Research Institute. (Nauch. -issle. Institut Plasticheskikh Mass, Moskva.)

SUBMITTED: July 28, 1956.

AVAILABLE:

Card 2/2

83410

5.3830A

S/191/60/000/006/002/015
B004/B054

AUTHORS: Akutin, M. S., Parlashkevich, N. Ya., Kogan, I. M., Rubinshteyn, V. V., Gribkova, R. N.

TITLE: Production of Block Polymers and Grafted Polymers by Means of Spark Discharge in a Liquid

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 2 - 5

TEXT: The authors report on experiments made with an apparatus schematically shown in Fig. 1. Spark discharges were generated in a vessel (Fig. 2) filled with the substances to be polymerized; a shaping spark gap was connected in series with the spark gap in the vessel. The condenser potential attained 60 kv, the energy stored was about 100 joules, the discharge frequency was about 0.5 - 1.5 cps. The authors discuss the effects of the spark (hydraulic and cavitation surge, formation and recomposition of free radicals), as well as the influence of aperiodic discharges on the transformation of electric energy into mechanical energy. A solution of 15 parts by weight of polyvinyl chloride, 50 parts by weight of methyl methacrylate, and 100 parts by weight of cyclohexane

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83410

Production of Block Polymers and Grafted Polymers by Means of Spark Discharge in a Liquid

S/191/60/000/006/002/015
B004/B054

proved to be convenient for the production of grafted polymers. After 5 hours of spark discharges at 20°C, the authors performed a heating to 100°C, a precipitation of the cyclohexane and the methyl methacrylate not having reacted by means of ethanol, and an extraction of the polymethyl methacrylate and the polymer with a low content of polyvinyl chloride (PVC) by means of glacial acetic acid. The insoluble fraction contained PVC and grafted polymer with a high content of vinyl chloride. A comparison with a solution not treated with sparks (Table) showed that in this case the insoluble fraction contained only 37 molecules of methyl methacrylate per 100 molecules of vinyl chloride whereas in the insoluble fraction of a spark-treated solution 100 molecules of vinyl chloride contained 63 molecules of methyl methacrylate. Thus, the yield in grafted polymer was doubled. Block polymers were produced from 5% solutions of PVC and ethyl cellulose (1 : 1) in equal parts of ethyl acetate + cyclohexane under the same conditions as the grafted polymers. The chlorine content of the insoluble fraction was 45%. There are 2 figures, 1 table, and 13 references: 9 Soviet, 1 British, 1 Belgian, and 2 German.

Card 2/2

26260

S/194/61/000/001/027/038
D216/D304

5.1210

AUTHORS: Kogan, I.N., Menes, L.I. and Parlashkevich, N.Ya.

TITLE: Continuous measurement of viscosity by means of an ultrasonic viscosimeter

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1961, 22, abstract 1 E184 (V Sb. Primeneniye ul'traakust. k issled. veshchestva. no. 10, M., 1960, 33-45)

TEXT: The description of an ultrasonic viscosimeter is given. It consists of a half-wave magnetostrictive membrane immersed in the liquid. The membrane frequency is 28 Kc/s and is connected to the electronic circuitry. The theory is given of a probe which excites in the surrounding medium transverse waves, decaying at a different rate depending on viscosity. A short pulse (5 microsecond) excites decaying oscillations in the membrane. These oscillations are amplified, detected and applied to a phantastron circuit, which in

Card 1/2

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S/194/61/000/001/027/038
D216/D304

Continuous measurement...

turn switches on a pulse generator at an instant when the pulse at its input becomes smaller than a certain predetermined level. The pulse repetition frequency is thus proportional to the viscosity of the medium. The instrument has four ranges covering 0 to 50 000 centipoise g/cm^3. The temperature measurement interval -100 to +200° C. Accuracy ±5% of the full scale of respective range. Minimum quantity of liquid required for measurements - a few cm^3. 7 references.

Card 2/2

26253

15.8600 2209, 1555

S/194/61/000/001/020/038
D216/D304

AUTHORS: Akutin, M.S., Parlashkevich, N. Ya., Kogan, I.N., Kalinina, S.P. and Menes, L.I.

TITLE: The use of ultrasonics for obtaining bloc-and graft-polymers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1961, 15, abstract 1 E130 (V Sb. Primeneniye ul'traakust. k issled. veshchestva, no. 10, M., 1960, 47-59)

TEXT: Results are given of preliminary qualitative experiments aimed at assessing the possibility of obtaining, with the help of ultrasonic, bloc- and graph-polymers based either on fluoro-polymers of polysiloxanes or on polymethyl methacrylate, ethyl-cellulose, PVC, phenolics etc. The role of ultra acoustics in this case is to split the polymer molecules into free macro-radicals by cavitation, by friction forces between the polymer molecules and the solvent, by varying gradients of velocity and acceleration

Card 1/2

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D216/D304

The use of ultrasonics...

according to the length of the molecules, and by certain other phenomena. The recombination of free macro-radicals of various polymers results in the formation of other polymers having new physical properties. The properties of two samples are given which have been obtained with the use of ultrasonics. The ultrasonic installation for obtaining bloc- and graft-polymers is described. Quartz (frequency 550 Kc/s, intensity 15 W/cm^2) and barium titanate (frequency 800 Kc/s and intensity 8 W/cm^2) have been used as radiators.

Card 2/2

KOGAN, I.N.; RUBINSHTEYN, V.V.; VURZEL', F.B., MAY, A.V.

Continous viscosimeter. Report No.1: Probe theory. Plast.massy no.11:42-46 '60. (MIRA 13:12)

(Viscosimeter)

S/081/62/000/012/062/063
B158/B101

AUTHORS: Akutin, M. S., Parlashkevich, N. Ya., Kogan, I. N., Rubinshteyn, V. V.

TITLE: The possibility of producing block and graft polymers using a spark discharge

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 663, abstract 12R55 (Sb."Primeneniye ul'traakust. k issled. veshchestva", M., no. 12, 1960, 125-131)

TEXT: A solution of two or several polymers in a non-polymerizable solvent is subjected to the effect of a high voltage spark discharge (see RZhKhim., no. 23, 1960, 94641) with a given repetition frequency (0.5-1.5 cps). Under the effect of the pressure pulses occurring with the discharge, the polymer molecules are ruptured with the formation of macroradicals; on their subsequent recombination, block copolymers are formed. Graft polymers are produced with analogous treatment of a solution of a polymer in a monomer. The synthesis of graft copolymers of polyvinyl chloride and methyl methacrylate and also of block copolymers of polyvinyl chloride and ethyl cellulose is described. [Abstracter!

Card 1/2

S/081/62/000/012/062/063
B158/B101

The possibility of producing block ...

note: Complete translation.]

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Card 2/2

L 36102-66 EWT(m)/EWP(j)/EWP(k)/T/EWP(t)/ETI IJP(c) JD/WW/RM/GD/RM

ACC NR: AT6013171 (A) SOURCE CODE: UR/0000/60/000/000/0125/0131

AUTHORS: Akutin, M. S.; Parlashkevich, N. Ya.; Kogan, I. N.; Rubinshteyn, V. V. 73 71 B+1

ORG: none

TITLE: Feasibility of preparation of block and graft polymers by means of spark discharge

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k issledovaniyu veshchestva, no. 12, 1960, 125-131

TOPIC TAGS: graft copolymer, block copolymer, electric discharge, methacrylate plastic, fluorocarbon plastic, vinyl chloride / IM60-0.03 capacitor, discharge chamber, capacitor

ABSTRACT: High voltage spark discharge in solution, discussed previously by M. S. Akutin, N. Ya. Parlashkevich, L. I. Menes, I. N. Kogan, V. V. Rubinshteyn, and V. N. Kotrelov (Avtorsk. svid. No. 127392, 39S, prioritet 5 iyunya 1959 g.), is described as applied to the synthesis of block and graft polymers. The polymers prepared in this manner were those of fluoroethylenes and methylmethacrylate, also vinyl chloride and methylmethacrylate, with the emphasis on the latter type. The diagram of the equipment employed in this work is shown in Fig. 1, with the details of the discharge chamber illustrated in Fig. 2. R. N. Gribkova participated in the experimental stage of this work.

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L 36102-66

ACC NR: AT6013171

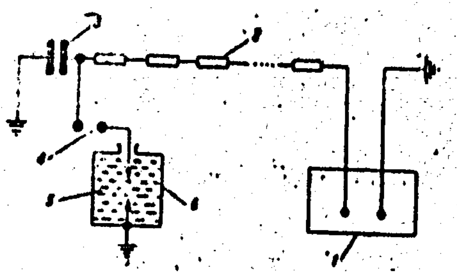

Fig. 1. Diagram of experimental set-up; 1 - high voltage rectifying apparatus. Rectified voltage is regulated in the range 50--100 kv; 2 - assembly of charge resistors; 3 - high voltage pulse capacitors, 0.056 microfarad (two parallel condensers of the IM60-0.03 type); 4 - "initiating" spark gap. Discharging rods are composed of two metallic spheres 35 mm in diameter; 5 - main (operating) discharge gap. Steel rod serves as positive electrode, bottom of the metal chamber serves as negative one; 6 - bath with the treated solution (see Fig. 2).

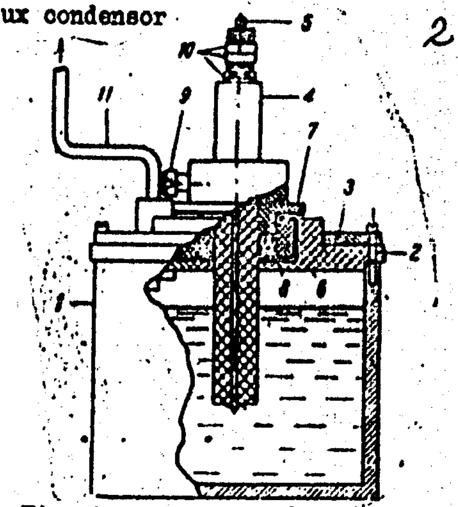

Fig. 2. Structure of the discharge chamber: 1 - cell; 2 - lid (teflon); 3 - collar; 4 - teflon cylinder; 5 - electrode; 6 - gasket seat (textolite); 7 - threaded pressure bushing (textolite); 8 - gasket (vacuum resin); 9 - bolt (vinyl plastic); 10 - nuts; 11 - glass tube.

Orig. art. has: 2 figures and 2 tables.

Card 2/2 LS SUB CODE: 07/ SUBM DATE: 31Oct60/ ORIG REF: 008/ OTH REF: 003

S/194/62/000/004/057/105
D295/D308

AUTHORS: May, A. V. and Kogan, I. N.

TITLE: Ultrasonic generator for technological investigations

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-33d (V.sb. Primeneniye ul'traakust. k issled. veshchestva. no. 14, M., 1961, 261-267)

TEXT: The electrical equivalent circuit of a piezoelectric transducer is considered. On the basis of data on the barium titanate radiator used, having 50 mm diameter and a resonant frequency of 80 kc/s (with a sufficiently effective cooling system, owing to which the radiator has operated protractedly with an intensity of 8 - 10 W/cm^2), an inductive coupling has been chosen between the oscillatory circuit in the anode circuit of the valve and the output oscillatory circuit to which the radiator is connected. The parameters of this matching circuit and the method of its tuning are given. /Abstracter's note: Complete translation./

Card 1/1

KOGAN, I. N.

S/081/61/000/022/064/076
B101/[illegible]

AUTHORS: Parlashkevich, N. Ya., Luzhkov, Yu. M., May, A. V., Volchek, I. S., Kogan, I. N., Rubinshteyn, V. [illegible] Vurzel', F. B.

TITLE: Some problems of automatic control and regulation in phenol-formaldehyde resin production

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 444, abstract 22P8 (Mekhaniz. i avtomatiz. proiz-va, no. 3, 1961, 17 - 20)

TEXT: Concentration of catalyst in phenol-formaldehyde resin (PFR) and viscosity are the most important characteristics determining the condensation process and the quality of the finished product. The authors describe schemes for controlling the catalyst concentration in continuous production processes of PFR, basing on a change in the electrical conductivity of the mixture, which evidently depends on the concentration of the hydrochloric or oxalic acid in the mixture. For the automatic control of PFR viscosity, they suggest the use of an ultrasonic viscosimeter. A diagram for the continuous control of viscosity is given. [Abstracter's note: Complete translation.]

Card 1/1

3

S/191/61/000/003/010/015
B124/B203

AUTHORS: Kogan, I. N., Vurzel', F. B., Rubinshteyn, V. V., May, A.V.

TITLE: Continuous-action viscosimeter. Design and principle of the instrument

PERIODICAL: Plasticheskiye massy, no. 3, 1961, 49-53

TEXT: It had been shown earlier (Ref. 1: I. N. Kogan, V.V.Rubinshteyn, F. B. Vurzel', A. V. May, Plast.massy, no.11, 42 (1960)) that longitudinal natural oscillations of a magnetostrictive plate of the probe (immersed in a liquid of the viscosity η and the density ϱ) excited by an impulse are attenuated with time, exponentially with the damping coefficient α ($\alpha \simeq C\sqrt{\varrho\eta}$ (1)) (where C is a constant dependent on the properties of the plate material and its geometrical dimensions). The real damping coefficient of the plate α_{Σ} is, however, a little higher, since Eq. (1) does not consider the no-load losses in the mechanical system of the probe. In the device described, the oscillations of the magnetostrictive plate are generated by current impulses which periodically pass the probe winding, the oscillations between two successive impulses being almost completely

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Continuous-action viscosimeter. ...

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attenuated. The mechanical oscillations of the plate induce, in the probe winding, an alternating voltage of the same frequency and shape, which controls the frequency of the exciting impulses. The instrument works as follows: A saw-tooth generator (Fig.1) gives periodical exciting current impulses, 15 - 20 µsec long, to the probe. The alternating voltage induced in the probe winding by mechanical oscillations is amplified, and conducted to the detector and the first integrator, where the signal is rectified, and its d.c. component is isolated. The voltage is re-amplified in the second integrator, balanced, and conducted into the primary circuit of the control tube of the saw-tooth generator; this ensures an automatic control of the frequency of exciting impulses. The instrument operates in such a way that the product of the damping coefficient α_{Σ} and of the frequency of impulses remains practically constant, i.e., $\alpha_{\Sigma}T = \mathrm{const}$ (2), so that any value α_{Σ} corresponds to a certain frequency $F = 1/T \sim \alpha_{\Sigma}$ which is measured. Fig. 3 shows a variant of the design of the probe. This instrument also permits continuous remote measurements at temperatures up to 200°C in the ranges of 0-50, 0-500, 0-5000, and 0-50,000 centipoise·g/cm^3,

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Continuous-action viscosimeter. ...

with an accuracy of 5% of the full scale of the range concerned. A minimum of a few cm^3 is required for measuring substances at rest and during flow. F. A. Yakushev, V. M. Glazunov, and A. M. Raskina assisted in the investigations. There are 4 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc.

Legend to Fig. 1: Functional scheme of the instrument. (1) Differentiation cell, (2) amplifier, (3) detector and integrator I, (4) integrator II, (5) control tube, (6) saw-tooth generator, (7) probe, (8) voltage stabilizer I, (9) voltage stabilizer II, (10) frequency meter.

Card 3/3

PARLASHKEVICH, N.Ya., kand.tekhn.nauk; KOGAN, I.N.; RUBINSHTEYN, V.V.;
MAY, A.V.; VOLCHEK, I.S.

Automation of the production of phenol-formaldehyde resins. Zhur. VHKO 6 no.5:539-544 '61. (MIRA 14:10)
(Phenol condensation products) (Automation)

KOGAN, I.N.; PARLASHKEVICH, N.Ya.; VURZEL', F.B.; RUBINSHTEYN, V.V.;
KORNEYEV, I.Ya.; POTAPOV, B.A.; PLATONOVA, G.S.

Continuous control of viscosity in the production of liquid bakelites. Plast.massy no.6:45-50 '62. (MIRA 15:6)
(Phenol condensation products) (Viscosity)

S/191/63/000/003/014/022
B101/B166

AUTHORS: Kogan, I. N.; Korneyev, I. Ya.

TITLE: Automated control of viscosity during the production of glue resins. Continuous control

PERIODICAL: Plasticheskiye massy, no. 3, 1963, 45 - 50

TEXT: The method of measuring temperature and viscosity without having to take samples during the production of liquid phenol resins, as described in Plast. massy, no. 6, 45 (1962), was now applied in the continuous production of 268 glue resin. The latter is produced by dephenolation of phenol waste waters by adding reagents and NaOH as catalyst to the waste water and by condensation in a vessel. An 18 - 20% resin solution flows from the reaction vessel into the evaporating apparatus where it is concentrated to 40 - 50% at 50 - 60°C. Two nomograms, one with the viscosity as parameter and the other with the temperature as parameter, were plotted on the basis of the dependence $\eta(\xi, T) = \eta_N(\xi) \exp\{[U(\xi)/k] (1/T - 1/T_N)$, where $\eta(\xi, T)$ is the viscosity at arbitrary temperature T, ξ is an arbitrary parameter of production, $\eta_N(\xi)$ is the viscosity at 20°C, and $U(\xi)$ is the activation

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PARLASHKEVICH, N.Ya.; KOGAN, I.N.

Measurement of the viscosity of undiluted polymer solutions with an ultrasonic viscosimeter. Plast. massy no.1:49-52 '65. (MIRA 18:4)

KOGAN, I.N., inzh.; KRICHMAR, G.Ya., inzh.; LUZHKOV, Yu.M., inzh.;
RUBINSHTEYN, V.V., inzh.

Multipoint ultrasonic viscosimeter. Mekh. i avtom.proizv. 19 no.2:33-35 F '65. (MIRA 18:3)

KOGAN, I.N.

Plotting the nomograms for the continuous viscosity control of liquid resins. Plast.massy no.2:35-37 '65.

(MIRA 18:8)

KOGAN, I.R.

Syringe for subcutaneous administration of oxygen. Zhur. nevr. i psikh. 54 no.8:677-678 Ag '54. (MLRA 7:9)

1. Krasnogorskaya (Moskovskoy oblasti) ob"yedinennaya bol'nitsa
(OXYGEN, administration,
subcutaneous, syringe)
(SYRINGES,
for subcutaneous admin, of oxygen)

KOGAN, I. R. Lt. Col. Med. Ser.

"The Method of Taking Arterial Pressure and Pulse Rate in Decompressio
Chamber Tests," Voyenno-medits. zhur., No.1, pp. 82-83, 1957

A special devise used by the author is described and illustrated. The results are claimed to be favorable.

Translation 1120034

KOGAN, I.R., podpolkovnik med. sluzhby

[redacted]

Equipment for heating the PBK-50 altitude chamber. Voen.med.zhur.
no.9:84-85 S '57. (MIRA 11:3)
(ALTITUDE--MEASUREMENT)

KOGAN, I. S.

Kogan, I. S. - "Hemoplastic fascia transplantations from human bodies and corpses in experiments," In the symposium: V. N. Shamov, Kiev, 1949, p. 237-41

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

KOGAN, I. S.

Kogan, I. S. and Gershgorina, S. A. "Fistulography in topis diagnosis of injuries to the intestinal tract," Vracheb. delo, 1949, No. 3, paragraphs 221-26.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

KOGAN, I. S.

Kogan, I. S. - Vladimir Nikolayevich Shamov," (Surgeon. On the 40th anniversary of his social and scientific activity), In the symposium: V. N. Shamov, Kiev, 1949, p. 5-16

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

KOGAN, I.S.

Sulfanilamide therapy for diabetes mellitus in tuberculosis. Trudy Ukr. nauch.-issl. inst. eksper. endok. 19:141-145 '64. (MIRA 18:7)

1. Iz patofiziologicheskogo otdela Ukrainskogo instituta eksperimental'noy endokrinologii i Klinicheskogo sanatoriya "Dolossy", Krym.

TARAKANOV, I.G.; KOGAN, I.S.; GOGOL', I.N., starshiy inzh.

Development of mining systems. Gor. zhur. no.3:15-19 Mr '62.
(MIRA 15:7)

1. Glavnyy inzh. kombinata "Achpolimetall" (for Tarakanov). 2. Glavnyy inzh. rudnika "Mirgalimsay" (for Kogan).
(Mirgalimsay region—Mining engineering)

TARAKANOV, I.G.; KOGAN, I.S.; NIVIN, A.G.

World's record set by Mirgalimsay miners. Gor. zhur. no.9:1-4 S '64. (MIRA 17:12)

1. Direktor Achisayskogo polimetallicheskogo kombinata (for Tarakanov). 2. Nachal'nik Mirgalimsayskogo rudnika (for Kogan).

DRONOV, I. A., inzh.; KOGAN, I. V., inzh.

New foreign means of transportation for carrying equipment and loads in areas which are difficult to reach. Stroi. i dor. mash. 7 no.11:35-38 N '62. (MIRA 16:1)

(Transportation, Automotive)

L 04424-67 EWT(d)/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6014296 SOURCE CODE: UR/0000/65/000/000/0378/0392

AUTHOR: Kogan, I. V. (SSSR)

34
Brl

ORG: none

TITLE: Checking the operation of logic systems 16

SOURCE: International Symposium on the Theory of Relay Systems and Finite Automata. Moscow, 1962. Sintez releynykh struktur (Synthesis of relay structures); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 378-392

TOPIC TAGS: logic circuit, logic design, logic element

ABSTRACT: As the general algorithm for testing logic systems is practically impossible, the present article tries to formulate general principles for synthesizing test schedules applicable to specific system classes and fault types. These theorems re checking tests are proven: (1) Any contact x_i in a nonrepetitive strong-coupled network liable only to open- or shorted-contact faults is sound if such a set $\omega(x_i \in \Omega)$ exists for which $f^x(\omega) = 0$, and a set $S(x_i \in S_{1\varepsilon}(S\Omega)$ exists for which $f^x(S) = 1$; (2) For any nonrepetitive strong-coupled network with

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n contacts, a test schedule can be set up whose length is $L < h+1$; (3) To ensure the absence of open- and shorted-contact faults in a disjunctive-normal-form-type network (DNF), it is necessary and sufficient that for α-sets composed for all network circuits $f^*(\alpha) = 1$, and for β-sets composed for all network contacts $f^x(\beta) = 0$; (4) For a DNF-type network having no absorptions, construction of all α-sets and β'-sets is possible; (5) If a DNF network liable only to open- and shorted-contact faults implements a logic function, and it is impossible to compose α- and β-sets for its individual circuits and contacts, then checking by these sets is unimportant for testing the network for faults; (6) The minimal checking test length, for a no-absorption DNF network, is given by: $L_{n,\min} > K + l_{\max}$. Orig. art. has: 4 figures, 20 formulas, and 7 tables.

SUB CODE: 09 / SUBM DATE: 27Aug65 / ORIG REF: 006

awm

Card 2/2

KOGAN, I.V., kand.tekhn.nauk

Program for processing net graphs. Mashinostroenie no.4:17-19
Jl-Ag '65. (MIRA 18:8)

contests and that for

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[illegible] can be assumed, is corrected if there exists

[illegible] contacts it is possible to construct [illegible] whose length

$L \leq n + 1$. In the [illegible]

[illegible]

set of successive tests. An actual circuit example is given [illegible]

KOGAN, I. Ya.

"Equine Diseases" Book compiled by A. Yu. Branzburg and A. Ya. Shapiro, edited by A.M. Laktionova, State Press for Agricultural Literature, 1947.

Articles contained in book include:

"Infectious Pustular Stomatitis (Variola) of Horses" by I. Ya. KOGAN, Maj, Vet Corps.

"Effect of Intravenous Infustions of Tripaflavin and Acriflavin on Animals during Repeated Use in Medicinal Doses" by A.I. Gromyko, Col, Vet Corps and I. Ya. KOGAN, Maj. Vet Corps, Mil Vet Lab.

"Paraffin-Xylol Thermometer for a Gas Chamber (III), by I. Ya. KOGAN, Maj, Vet Corps, Dist. Mil Vet Lab.

KOGAN, I. Ya., Lt. Col., Vet. Service
"A case of metastatic cancer in a horse."
SO: Vet. 26 (4) 1949, p. 33
So: 1949 Letopis' Zhurnal'nykh Statey, No. 16, item 11845

USSR / Zooparasitology. Mite and Insect Vectors of Disease Agents. Acarids. G

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19720

Author : Kogan, I. Ya.
Inst : Siberian Scientific-Research Veterinary Institute
Title : Distribution of the Ixodidae and Haemosporidiasis in Horses of Kemerovskaya Oblast'

Orig Pub : Sb. nauchn. rabot Sibirsk. n.-i. vet. in-ta, 1957, vyp 7, 107-126

Abstract : Kemerovskaya Oblast' is subdivided into 10 botanical-geographical regions, among which 4 are the forest-steppe ecotone, 5 - taiga, and 1 - foothill. The study of distribution of the various types of Ixodidae throughout

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USSR / Zooparasitology. Mite and Insect Vectors of Disease Agents. Acarids.

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19720

the oblast indicated that in the forest-steppe regions, which were in the recently former taiga, the prevailing role is played by Ixodes persulcatus (98.9% of the collections). However, in the typically forest-steppe ectones, on the whole, g. Dermacentor and occasionally I. persulcatus are encountered. Haemphysalis concinna are met with in spots. In the taiga regions I. persulcatus only is identified. From the haemosporidiasis (H) in horses, piroplasmosis (90% of the over-all H disease) and nuttalliosis are spread over the oblast. Forest-steppe regions are unfavorable for H development almost entirely; taiga and

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USSR / Zooparasitolo

ANAN'YEV, A.A.; LANG, A.G.; MAZOVER, I.S.; NIKOLAYEVSKIY, G.M.; PYASETSKIY, V.V.; DUKEL'SKIY, A.I., prof., doktor tekhn. nauk, red.; KOGAN, I.Ya., kand. tekhn. nauk, retsenzent; BAZANOV, A.F., inzh., retsenzent; SAMOYLOVICH, P.A., kand.tekhn. nauk, red.; VASIL'YEVA, V.P., red.izd-va; PETERSON, M.M., tekhn.red.

[Handbook on cranes]Spravochnik po kranam. Pod red. A.I.Dukel'skogo. Moskva, Mashgiz. Vol.2.[Crane mechanisms, their units and parts]Kranovye mekhanizmy, ikh uzly i detali. [By] A.A.Anan'ev i dr. 1962. 351 p. (MIRA 15:8)

(Cranes, derricks, etc.)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

Lightweight belt conveyers. Mekh.stroi. 4 no.9:23-24 S '47.
(MIRA 9:2)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut Stroydormash.
(Conveying machinery)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

Modern cable cranes. Mekh.stroi. 4 no.10:20-24 Oct. '47.(MLRA 9:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut otdela stroitel'nogo i dorozhnogo mashinostroyeniya.

(Cranes, derricks, etc.)

KOGAN, I. YA.

Podvesnye lentochnye transportery. Moskva, Mashgiz, 1949. 156, (4) p. illus.

Bibliography: p. (158)

Overhead belt conveyers.

DLC: TJ1390.K64

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

KOGAN, I. Ya.

"The transportation of the free-flowing materials across the water obstacles," Mechanization of Labor Consuming and Heavy Work, 1951.

KOGAN, I. YA.

Wire-Rope Transportation

Suspended cableway for transporting barrel. Vin. SSSR 12 no. 5 (1952).

9. Monthly List of Russian Accessions, Library of Congress, August, 1952 xxxxx 1953, Uncl.

KOGAN, I. Ya.

KOGAN, I.Ya.; ALFEROV, K.V., doktor tekhnicheskikh nauk, retsenzent; VALYTSKIY, I.I., inzhener, redakter; POPOVA, S.M., tekhnicheskiy redakter; MATVEYEVA, Ye.N., tekhnicheskiy redakter.

[Belt conveyers and their use in hydraulic construction] Lentochnye konveiery i ikh primenenie v gidrotekhnicheskom stroitel'stve. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 239 p. (MLRA 7:8)
(Conveying machinery)

Detailed and systematical description of various types of mobile and stationary belt conveyors and their separate parts. Necessary information on how to support and protect them. Notes on Assembling and exploitation. Advice on the choice of the size and model to be used. The calculation of the fundamental parameters. The various uses of belt conveyors in hydro-Technical construction.

KOGAN, I.Ya., kandidat tekhnicheskikh nauk; GOMOZOV, I.M., inzhener.

The incline of mobile tower cranes. Mekh.stroi. 10 no.7:3-6 Jl '53.
(MLRA 6:7)
(Cranes, derricks, etc.)

KOGAN, I. YA.

USSR/ Engineering - Construction

Card : Pub. 70 - 6/11

Authors : Kogan, I. Ya., Cand. of Techn. Sc.

Title : Arrangements for rotation of tower cranes

Periodical : Mekh. stroi. 4, 15-20, Apr 1954

Abstract : Special track arrangements for easy rotation of tower cranes, used in construction of large buildings, are described. The operation of such cranes over the new track arrangements, is explained. Illustrations; drawings.

Institution : .....

Submitted : .....

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

The BTK-100 tubular tower crane. Mekh.stroi.12 no.1:22-24 Ja'55.
(Cranes, derricks,etc.) (MLRA 8:3)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk
[illegible]

Calculating crane booms. Mekh.stroi.12 no.9:30-32 S'55. (MIRA 8:11)
(Cranes, derricks, etc.)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

Increase the productivity of tower cranes. Gor.khoz.Mosk.29 no.10:18-22 O '55. (MIRA 9:2)
(Cranes, derricks, etc.)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

Apparatus for turning tower cranes in a small radius. Gor.khoz.Mosk. 29 no.2:35-37 F '55. (MIRA 8:5)
(Cranes, derricks, etc.)

KOZLOVSKIY,A.A.; KORZHETSKIY,V.P., laureat Stalinskoy premii; POLYAKOV, V.G.; KHROMOVOY,A.P.; KOGAN,I.Y.; BAZANOV,A.F., laureat Stalinskoy premii.

The BTK-30 crane. Rats. i izobr. predl. v stroi. no.110:3-5 '55.
(Cranes, derricks, etc.) (MLRA 8:10)

KOGAN, I.Ya., inzhener.

[redacted]

Tubular tower cranes. Stroi. i dor. mashinostr. 1 no.4:36-39 Ap'56.
(MIRA 10:1)

(Cranes, derricks, etc.)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk; PANTSULAYA, G.I., inzhener.

Passenger cableway in a mine. Gor.zhur. no.5:32-35 My '56.
(MLRA 9:8)
(Cableways)

KOGAN, I.Ya., kandidat tekhnicheskikh nauk.

Stability of building tower cranes. [Trudy] VNIIStroidormash no.12:4-30. '56.
(MIRA 10:3)

(Cranes, derricks, etc.)

Kogan, I. Ya.

KOZLOVSKIY, A.A.; KOGAN, I.Ya.; SMIRNOV, G.Ya.; POLYAKOV, V.G.;
KORZHENTSKIY, V.P.; KHROMOV, P.P.

Equipment for a four-legged tower crane assuring efficient movement and operation within a small working range. Rats. i izobr. predl. v stroi. no.2:46-48 '57. (MIRA 11:1)
(Cranes, derricks, etc.)

100-7-2/11

AUTHOR: Kogan, I.Ya., Candidate of Technical Sciences

TITLE: **Development Methods of Crane Design for Construction of Sectional Buildings** (O putyakh razvitiya konstruktsii kranov dlya stroitel'stva sbornykh zdaniy)

PERIODICAL: Mekhanizatsiya Stroitel'stva, 1957, Vol.14, No.7, pp. 8 - 10 (USSR).

ABSTRACT: Cranes used at present can lift 3 - 5 tons, when used at maximum heights. Technical and economic data for the cranes CK-1 and M-5-5 are given in Table 1. These cranes were found unsuitable when used for buildings constructed from large units, as their output decreased by 15-20%. Difficulties were encountered when securing loads to the crane, especially when the height of the blocks was between 2.5 and 3 m. When steel eyes were inserted into the floor beams in order to lift the same, the additional steel requirements were 1.5 t/1 000 m^3 of floor unit. Recently designed devices for handling building units made it possible to reduce the assembly cycle from 40 - 50 min. to 15 - 20 min. But according to Ya.I. Linetskiy (Ref.1), 6 min./cycle are lost when these devices are repositioned. M.M. Idrisov (Ref.1, p.9) recommends a new crane construction which should eliminate all manual labour. An automatic gripping device is required in this case. Precise manipulation

Card1/2

100-7-2/11

Development Methods of Crane for Construction of Sectional Buildings

into an exact vertical and horizontal position, speed and instantaneous reaction of the hoisting mechanism when positioning the units are required. It is also necessary to minimise swinging which is detrimental to precise assembly work; to be able to turn the load by 360° and to return it in small angles. The operator can either watch the load and position it correctly by means of television control or by remote control. Cranes operating in urban areas should have caterpillar tracks so that no rails are required. The above described cranes make it possible to speed up the assembly of units whilst fewer operators are employed. Pre-stressed 3-dimensional units can be assembled more easily than large panels. These units are generally assembled in the factories. Their dimensions are: length: 12 - 14 m; width 3.2 - 4 m and height 3 - 3.2 m (height of a storey); the weight = up to 40 t /unit. Bridge cranes can be used for these spacial units if the lifting height of the crane exceeds that of the building by 2 - 3 m. The unit can be supported 1 - 1.5 m from the crane legs and the crane movement will then be of the order of 20 - 30 t/m, i.e. similar to that of a 5 ton capacity crane.
There are 1 table and 2 Russian references.

AVAILABLE: Library of Congress
Card2/2

1. Cranes-Design 2. Construction-Equipment

KOGAN, I.Ya., kand. tekhn. nauk.

Dynamics of tower cranes used in building. [Izd.] LONITOMASH 43:12-21 '57. (MIRA 11:6)

(Cranes, derricks, etc.)

KOGAN, Iosif Yakovlevich; VAYNSON, A.A., dots., kand. tekhn. nauk, retsenzent;
SLEZNIKOV, G.I., inzh., red.; MODEL', B.I., tekhn. red.

[Pillar cranes for use in building; design and construction]
Stroitel'nye bashennye krany; konstruktsiia i raschet. Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 305 p.
(Cranes, derricks, etc.) (MIRA 11:9)

KOGAN, I.Ya., kand. tekhn. nauk; PANTSULAYA, G.I., gornyy inzh.

Operating a suspended passenger cableway. Gor. zhur. no.2:70-71 F '58. (MIRA 11:3)

(Cableways)

KOGAN, I.Ya., kand.tekhn.nauk

Calculating the strength of tower cranes. Stroi. i dor. mashinostr
3 no.5:20-23 My '58. (MIRA 11:6)
(Cranes, derricks, etc.)

KOGAN, I. Ya., kand. tekhn. nauk

Testing the MBTK-75 crane models. Stroi. i dor. mashinostr.
3 no. 8:8-10 Ag '58. (MIRA 11:8)
(Cranes, derricks, etc.--Testing)

PETROV, G.D., inzh.; KOGAN, I.Ya., kand.tekhn.nauk

Using cable cranes in building hydraulic structures abroad.
Mekh.stroi. 15 no.10:28-32 O '58. (MIRA 11:11)
(Cableways) (Hydraulic engineering)

ROZHITSKIY, B.V.; KOGAN, I.Ya.

Organizing the use of automatic presses with bottom drives.
Kuz.-shtam.proizv. 1 no.4:26-29 Ap '59. (MIRA 12:10)
(Power presses)

SOV/110-59-5-3/25

AUTHORS: Averbukh, G.L., Engineer, Kogan, I.Ya., Engineer and Lur'ye, Z.Ya., Engineer

TITLE: The Selection of Automatic Cutouts Series A 3100 for Protecting the Circuits of Three-Phase Squirrel-Cage Motors (Vybor ustanovochnykh avtomatov serii AZ100 dlya zashchity tsepey trekhfaznykh dvigateley s korotkozamknutym rotorom)

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 5, pp 12-15 (USSR)

ABSTRACT: IT is most important to select correctly the rated currents and trip settings of protective devices for squirrel-cage motors. It is usual to make such selection on the basis of continuous operation with a limited number of starts per hour. This article gives a method of selecting the rated current of the tripping device protecting a three-phase squirrel-cage motor operating on a repeated short duty cycle with a large number of starts per hour. The method is based on the use of the experimental heating curve of the thermal element of the trip and on its current/time characteristics. Since the thermal element is

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SOV/110-59-5-3/25

The Selection of Automatic Cutouts Series A 3100 for Protecting the Circuits of Three-Phase Squirrel-Cage Motors

not a uniform body, the experimental heating curve cannot be expressed by a normal exponential equation. The experimental heating curve, shown in Fig 1, may be resolved into two sections of different time-constants. The first section is from the origin to the knee, with a heating time of the order of 2-3 minutes, and the second section is the rest of the curve. Considering the case of an automatic protective device type A3120 operating with a squirrel-cage motor started 30 times an hour, the cycle time will be 2 minutes and, since this is shorter than the first section of the heating curve, the heating calculations that follow need only be related to this part of the curve. Formula (1) is then given as an approximation to the first part of the heating curve and the method of determining the time constant is explained. The heating curve of the thermal element with a repeated short cycle is shown in Fig 2. The three repeated sections of the curve are: starting time, running time and idling time. After a certain number of operations an

Card 2/4

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The Selection of Automatic Cutouts Series A 3100 for Protecting the Circuits of Three-Phase Squirrel-Cage Motors

equilibrium condition is reached in which the heat evolved in the thermal element during the cycle is equal to that given out to the surroundings. When this condition is reached, the maximum temperature at the end of a start, corresponding to point A on the graph, should be somewhat below the operating temperature of the trip. The trip is calibrated so that it just does not operate at 110% rated current. To leave some margin of safety, the calculation is made for a maximum temperature rise at point A, equal to the steady-state temperature rise of the thermal element with 105% rated current. In order to determine the permissible overload rating of the thermal element for a given operating cycle, the cyclic heating curve of the element when the equilibrium condition has been reached is then considered. Equations are derived for the three sections of this heating curve and then are combined together to obtain the relationship between the operating time and the overload factor of the trip given in expression (11). The point of intersection between a

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curve constructed from expression (11) and the current/time characteristic of the trip gives the maximum permissible overload rating of the trip. By constructing a number of such points for different operating cycles as shown in Fig 3, the curve of overload factor as function of number of operating cycles per hour is obtained and shown in Fig 4. These curves are used to select the rated current of the automatic tripping device when operating with a given number of cycles per hour. A numerical example is then worked out for automatic protective equipment type A3124 with a rated trip current of 15A and the results are plotted in Fig 7 and 8. There are 8 figures and 1 table.

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